## REMARKS

Applicant is in receipt of the Office Action mailed November 29, 2005.

## Claim Status

Claims 1-15, and 24-32 were pending prior to entry of the present amendment.

Claims 1-6, 24, and 26 are herein amended.

Claims 16-23 and 30-32 have been canceled.

New claim 33 has been added.

Claims 1-15, 24-29, and 33 are now pending.

## Objections

Claims 31 and 32 were objected to as being duplicates of claims 28 and 29, respectively. Claims 31 and 32 are canceled.

## Art Rejections

Claims 1-15 and 24-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Foran et al. (USPN 6,072,500; hereinafter referred to simply as Foran) in view of Lin et al. ("A Parallel Rendering Approach to the Adaptive Supersampling Method"; hereinafter referred to simply as Lin).

Claim 1 recites:

A graphics system comprising:
a graphics processor configured to render a plurality of samples for an image, wherein said image is subdivided into a plurality of regions, and wherein a density of samples per pixel for at least one of the plurality of regions is different from a density of samples per pixel for at least one other of the plurality of regions;

a sample buffer coupled to said graphics processor for storing the plurality of samples; and

a sample-to-pixel calculation unit coupled to said sample buffer, wherein said sample-to-pixel calculation unit is configured to filter samples from the sample buffer to form output pixels.

Foran and Lin, either singly or in combination, do not teach or render obvious the features of claim 1:

"to render a plurality of samples for an image, wherein said image is subdivided into a plurality of regions, and wherein a density of samples per pixel for at least one of the plurality of regions is different from a density of samples per pixel for at least one other of the plurality of regions".

The Examiner states in the current Office Action that "Foran does not teach "pixels are rendered with a variable density of samples, wherein the density varies by region"" [emphasis added].

The Examiner also states that Lin teaches on page 513 that "density varies by region". Linn does refer to a "Screen Subdivision Scheme" on page 513, wherein "processors are assigned to handle a group of subdivided screen regions", but Lin does not relate this teaching in any way to sample density within a region.

Linn also teaches on page 512, lines 21-23:

"...when scan converting a **polygon**, if the polygon covers the whole pixel, we sample the pixel only once. If the polygon partially covers the pixel, we perform a supersampling of that pixel."

However, this teaching is not related to a region of the image as defined in Applicant's specification, but instead only refers to the sample density within a polygon. Lin is silent on rendered sample density varying by region.

The Examiner identifies Lin's distinction between pixels intersected by the edge of a polygon and pixels wholly inside a polygon as equivalent to Applicant's subdivided regions of an image. However, this identification is clearly not consistent with Applicant's use of the term region as described at least at page 32, lines 5-14:

> "If the graphics system implements variable resolution super sampling, then the **triangles** are **compared** with the **sample density region boundaries** (step 208B). In variable-resolution super-sampled sample buffer implementations, different regions of the display device may be allocated different sample densities based upon a number of factors (e.g., the center of the attention on the screen as determined by eye or head tracking). Sample density regions are described in greater detail below (see section entitled Variable Resolution Sample buffer below). If the **triangle crosses a region boundary** (step 210), then the **triangle may be divided into two smaller polygons along the region boundary** (step 212). This may allow **each newly formed triangle** to have a **single sample density**.

Applicant submits that claim 1 is non-obvious and patentably distinguished over Foran and Lin for at least the reasons given above. Applicant further submits that the independent claims 24, 26, and 33 are also non-obvious and patentably distinguished over Foran and Lin for at least the reasons given above in support of claim 1.

Therefore, Applicant submits that independent claims 1, 24, 26, and 33 and their dependent claims are allowable.

## CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

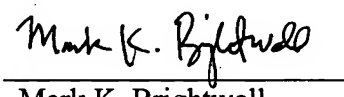
If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5181-09612/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☒ Information Disclosure Statement

Respectfully submitted,



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